TEALE
ON
PLASTIC OPERATIONS.

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ON

PLASTIC OPERATIONS

FOR THE

RESTORATION OF THE LOWER LIP,

AND FOR THE RELIEF OF SEVERAL DEFORMITIES OF THE FACE AND NECK.

BY THOMAS P. TEALE,

SURGEON TO THE LEEDS GENERAL INFIRMARY.

LONDON:
JOHN CHURCHILL, NEW BURLINGTON STREET.
MDCCCLVII.

LONDON :
REED AND PARDON, PRINTERS.
PATERNOSTER ROW.

The following pages are reprinted from the Medical Times and Gazette of June 6th, 13th, and 20th, 1857.

T. P. T.

ON PLASTIC OPERATIONS,

ETC.

THERE is, perhaps, no department of Surgery in which the practice of the present day contrasts more favourably with that of the age immediately preceding than the Plastic.

In the hope of advancing, in some degree, this department, I invite the attention of the Profession to the following series of cases, in which the lower lip has been restored, and several deformities of the face and neck have been removed or lessened.

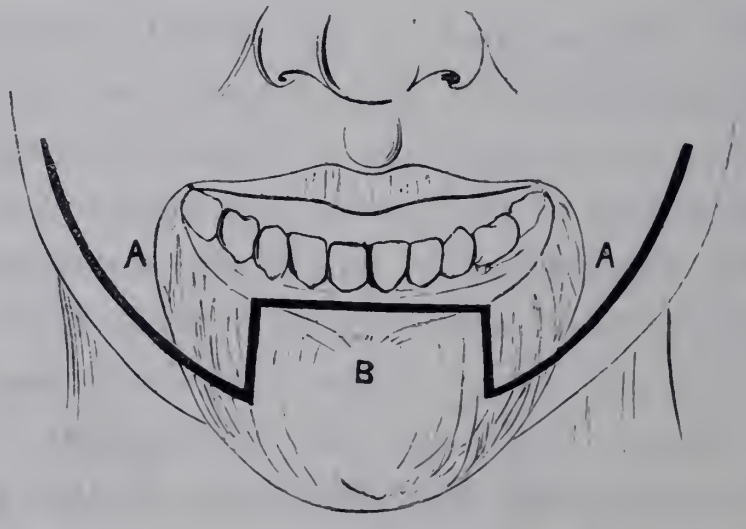
In the Transactions of the Royal Medical and Chirurgical Society for 1855, I was honoured by the publication of a paper on a Plastic Operation for the Restoration of the Lower Lip, which was exemplified by three cases in which the operation had been performed. I now propose to relate these cases more fully, and some others that have since occurred to me. Each case will be illustrated by an engraving, showing the condition of the patient both before and after operation.

To prevent repetition in the relation of the cases, I shall first describe the several operations to which these patients have been subjected.

1.—OPERATION FOR THE RESTORATION OF THE LOWER LIP.

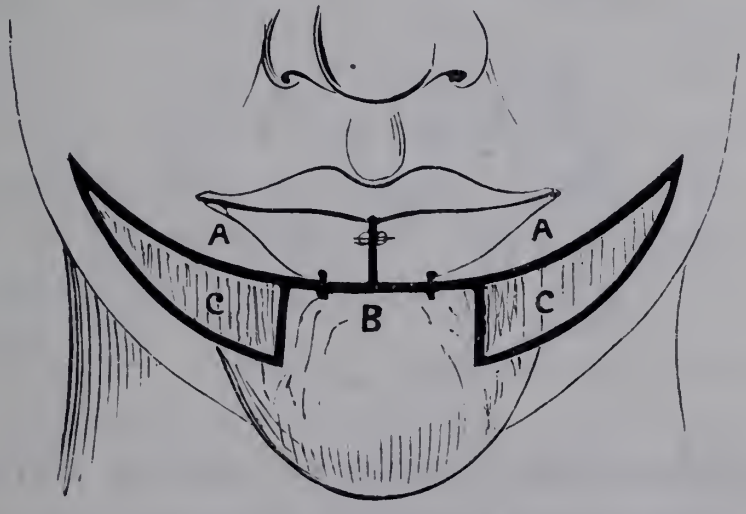
The usual cause which renders this operation necessary is the contraction following deep and extensive burns of the neck. As contraction advances, the chin becomes drawn down to the sternum; the mucous membrane of the lower lip is turned outwards, and drawn to the lower edge of the chin; the incisor teeth of the lower jaw gradually assume a horizontal direction, and are drawn much in advance of those of the upper jaw. In extreme cases the lower incisors take a direction almost horizontal. The saliva is constantly dribbling away, and the tongue sometimes lolls out of the mouth.

To relieve this sad condition the following operation is proposed:—



A A. Lateral flaps formed of everted lower lip and cheek. B. Central portion of everted lower lip.

Two vertical incisions, about three quarters of an inch in extent, are made through the everted lip down to the bone. These incisions are so placed as to divide the upper portion of the everted lip into three parts—the middle being equal to one-half of the natural breadth of the lip, while the two lateral portions are each equal to one-fourth. From the lower end of each vertical incision the knife is carried in a curving direction outwards and upwards to a point situated about one inch from the angle of the mouth opposite to the second molar tooth of the upper jaw. The two flaps thus marked out and deeply incised are then separated from the bone, the mucous membrane uniting them to the alveoli being freely divided. Lastly, a bare surface is made along the alveolar border of the middle portion of the everted lip. The incisions being now completed, the lateral flaps are drawn upwards and united by



A A. Lateral flaps united in the median line above the central portion of everted lower lip B. C C. Exposed surfaces left to granulate.

twisted sutures to each other in the median line, and to the middle portion of the everted lip at their inferior border. In this way a new lip is, as it were, built upon the middle portion of the old one.

2.—OPERATION FOR RESTORATION OF THE UPPER LIP.

The process of cicatrization sometimes reduces the upper lip to a narrow transverse band, drawn up close to the nose, leaving the upper teeth and gums exposed. This deformity interferes with the perfect closure of the mouth, and causes an unseemly aspect.

The contracted upper lip in the fifth case of the present series was restored to its natural size and function by the following operation :—

A crucial incision is made (*en saltire*), having its point of intersection immediately below the septum of the nose. Each limb of this incision is about

one and a half inch in length. The two limbs on each side diverge moderately as they pass outwards to the cheek, and enclose between them an acutely angular flap of skin and other tissues. This crucial incision is extended deeply through the entire substance of the imperfect lip and the cheeks. The parts implicated in the incisions are then freely loosed from their attachments to the superior maxillary bone by the knife being passed upwards between the bone and the remnant of lip. The parts being thus detached, the two lateral angular flaps are drawn across the median line, dovetailing with each other, and thereby increasing the depth of the lip at the expense of its breadth. In this position the flaps are retained by one pin and twisted suture.

3.—OPERATION FOR RELIEVING CONTRACTIONS OF THE NECK.

In some cases the contraction of the neck is so great that the head is bowed forwards, the chin drawn to the sternum, and the lateral movements of the neck greatly restrained. These evils may generally be much mitigated, and sometimes completely relieved by plastic surgery.

In 1839, Mr. Carden* of Worcester operated upon a girl aged fourteen years, who was much deformed by a burn, which occurred seven years before. The movements of the head were much

* Transactions of Provincial Medical and Surgical Association, vol. xii.

restricted; the mouth was permanently open; the tongue protruded; the lower incisors projected horizontally, and there was constant dribbling of saliva. A transverse incision was made throughout the entire extent of cicatrix in front of the neck. The chin was then drawn upwards, and every tense band connected with the cicatrix was divided, until the head was relaxed nearly into its natural position. A flap of skin, three inches long and two and a half inches wide, was detached on each side from over the clavicle and chest. These were raised and united in front of the throat. The degree of improvement effected in this case, and tested by the lapse of four years, was highly gratifying.

Subsequently to the performance of Mr. Carden's operation, a similar proceeding was adopted in several cases, with great success, by Dr. Mutter,* of Philadelphia.

I have performed this operation in seven cases since August, 1848, and have witnessed it in some others by my colleagues at the Leeds Infirmary.

In all the cases which I have seen there has been a marked and most satisfactory improvement in the movements of the head and neck. The displacement of the lip was also in a greater or less degree mitigated by the operation on the neck, but in several of the cases this particular deformity remained to such an extent as to render a special operation for the restoration of the lower lip subsequently necessary.

* British and Foreign Medical Review, April, 1845.

In these autoplastic operations on the neck it is of essential importance, as stated by Dr. Mutter, that the incision of the scar should extend from sound skin on one side of it to sound skin on the other, and that every band of adventitious fibrous tissue beneath the scar should be divided until the bottom of the wound discloses a loose healthy cellular tissue.

The flap to be transplanted may be taken from any neighbouring portion of the neck, shoulder or thorax, where healthy skin can be obtained. In some cases, however, from lack of sufficient sound skin, I was under the necessity of including cicatrized skin in the flap.

The very accurate adaptation of the flap by suture should be avoided, as great tension renders the flap liable to slough. It is, therefore, better to be content with attaching the flap only at its free extremity and one of its borders, and to leave the other border loose. Much may be done afterwards by careful dressing, during the healing process, to rectify any separation of the parts.

As far as I have observed, the transplanted flap rarely unites to the edges of the wound by the "first intention." All that is usually accomplished in the first instance is an organic union of the cellular surface of the flap to the parts beneath. The more close approximation of the edges of skin is obtained during the processes of granulation and healing.

When the bands of scar are so numerous or extensive as to require more flaps of skin than one to be inserted, it is better to repeat the operation at separate times. I saw much constitutional disturbance in one case from the operation having been conducted on too large a scale in the first instance.

After the lapse of some months the transplanted portion of skin is generally found to have yielded to a process of stretching, so as to exceed considerably its original dimensions.

4.—OPERATION FOR RESTORATION OF THE LOWER EYELIDS.

Eversion of the lower eyelid, its tarsal border being drawn far down the cheek, is a frequent result of contracted scars. Besides the revolting appearance caused by permanent ectropeon, the patient suffers habitually from a low form of inflammation of the conjunctiva and cornea, in consequence of these parts having been habitually deprived of the protection of the eyelid.

The eyelid in such cases may frequently be restored to its natural position by the following operation.

An incision is made across the cheek parallel to the displaced tarsal border, about three lines below it. The portion of skin between this incision and the edge of the tarsus, along with the whole substance of the eyelid as far as the edge of the orbit, is freely dissected upwards. The eyelid thus loosened

is placed in its natural position, and the chasm left thereby is filled by a piece of skin transplanted from the side of the face. This operation succeeded perfectly in the right eye of William Bradley, the subject of the fifth case. It was attempted with only partial success in both eyes of John Leach, the subject of the fourth case. The want of complete success in this instance, was owing to the total absence of any portion of sound skin in the neighbourhood; on which account, I was obliged to transplant on each side a piece of cicatrix, which, having only low vitality, sloughed to a considerable extent. In two other cases, not included in this series, the operation succeeded perfectly.

5.—RESTORATION OF THE UPPER EYELIDS.

From the contraction of scars of the upper eyelids and forehead, the upper lids are sometimes everted, and their tarsal border is bound firmly to the superciliary ridge.

A plastic operation similar to that for the lower lids may be practised with advantage in this deformity. In the case of John Leach, to be hereafter related, I operated on each of the upper lids, by making a transverse incision parallel to the tarsal border, at a distance of three lines above it. The substance of the eyelid was then dissected downwards and freely loosened from the edge of the orbit. The upper eyelid being thus restored to its natural

position, the vacuity was filled by a piece of skin transplanted from the temple. In both eyes the operation succeeded.

CASES.

CASE I.

Emma Spencer, aged 9 years, was admitted into the Leeds Infirmary in April, 1849, in the hope of being relieved of the distress she suffered from the contraction of scars, caused by an extensive burn a few years before. Her head was bowed down upon the chest; the chin, covered by the everted lower lip, was firmly bound to the upper part of the sternum; strong bands of scar extended on each side from the whole extent of the lower jaw to the clavicular and acromial regions; the lower incisor teeth tended to the horizontal direction; and the saliva was constantly dribbling away. There was scarcely any portion of sound skin in the front of the chest, except a narrow strip beneath the left clavicle. The rest of the integument in this region showed an unbroken surface of scars.

April 20, 1849.—The strong bands of scar on the right side of the jaw and chin were freely divided, and also the bands of adventitious fibrous tissue seen at the bottom of the wound, until loose areolar tissue was reached. A piece of scarred skin, three

inches in length and two in breadth, taken from beneath the right clavicle, was then dissected up and turned so as to occupy the chasm formed by the division of the bands of scar. The precautions mentioned in a former part of this essay, as to the application of sutures, and the avoidance of too great tension of the flap, were observed.

On the third day after the operation, the flap was found to have formed organic union by its areolar surface to the general surface of the wound, but scarcely any union by its cutaneous borders. The healing went on afterwards in a favourable and rapid manner, and the patient was allowed to return home for a few weeks.

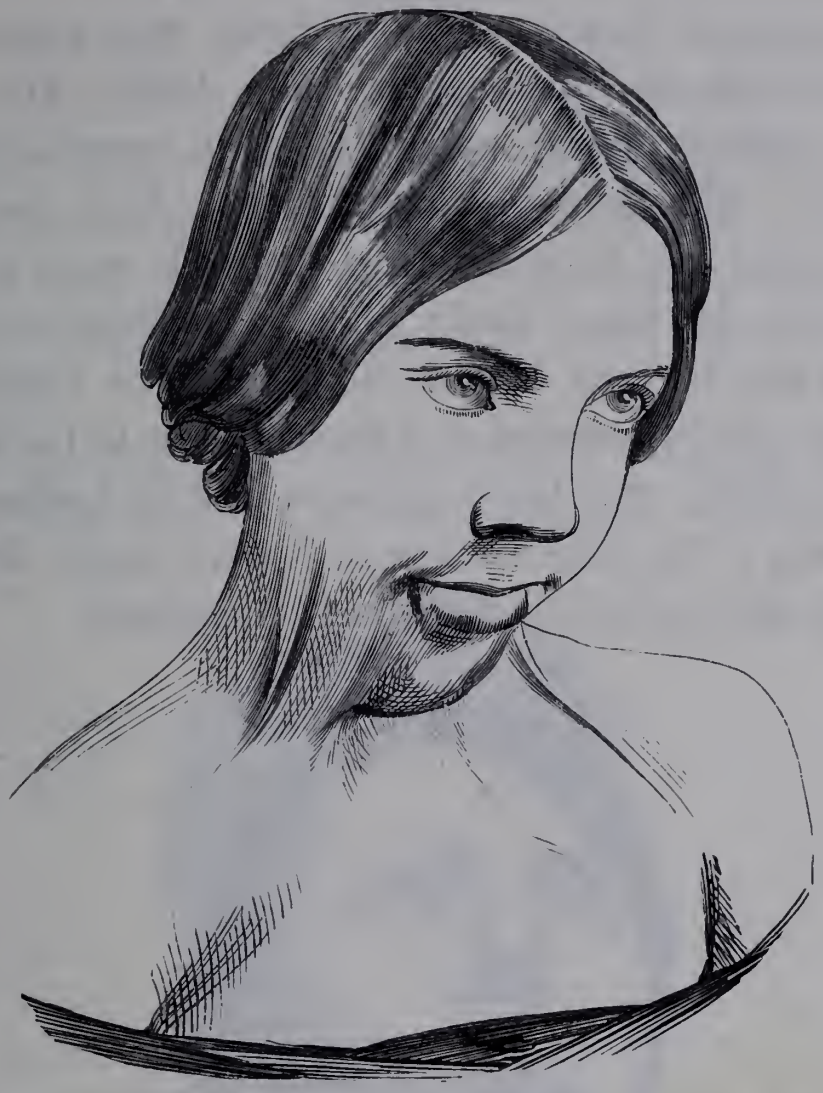
In the summer of the same year, she again entered the Hospital. The chief bands on the left side of the chin and jaw were divided, and a portion of integument from beneath the left clavicle was transplanted as in the former operation. The flap united in its new position, and the patient again returned home.

January, 1850. — The former operations were found to have greatly restored the movements of the head and neck. The chin was raised considerably from the sternum, and there was a fair amount of lateral motion of the head, although a portion of band still remained on the right side of the neck. Her chief distress at this date was caused by the eversion of the lip, and the inability to hold the saliva.

Emma Spencer, April, 1849

The operation for restoration of the lower lip, described previously, was performed. The incisions healed rapidly, a good lip was formed, and she returned home able to retain the saliva.

November, 1856.—At my request she came to the Hospital, that her state after the lapse of a few years might be ascertained. Since the operation in January, 1850, she had continued able to retain



Emma Spencer, November, 1856.

the saliva. The front incisor teeth had lost much of their horizontal tendency, and in fact had nearly resumed their natural position. The everted mucous membrane had become paler, but was still a little redder than the surrounding skin, and the mucous follicles of the part continued to pour out some fluid.

The photograph for the accompanying engraving was taken in November, 1856.

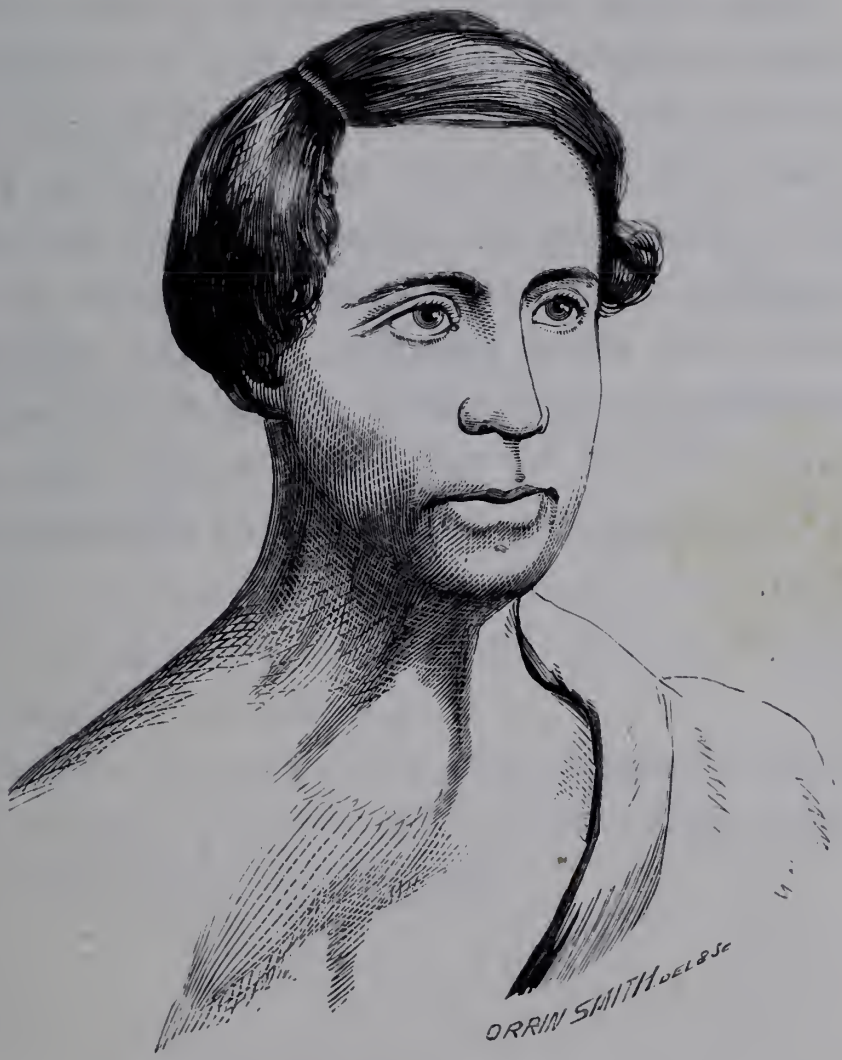
CASE II.

JONATHAN HIRST, aged 13 years, was admitted into the Leeds Infirmary in June, 1853. He had been severely burnt about the neck several years before. The head had been drawn down to the chest, and the movements of the neck were much impaired by large bands of scar in front of the throat and on each side of the neck. The lower lip was completely everted and drawn down to the edge of the chin; the lower incisors had a horizontal tendency; the cheeks and eyelids were drawn downwards, and the saliva could not be retained.

Jonathan Hirst, June, 1853.

June 9, 1853.—A large mass of scar situated on the left side of the neck and in front of the throat was divided, and numerous bands of adventitious fibrous structure were destroyed, so as to expose the natural cellular and adipose tissue beneath. In the space thus produced a flap of skin taken from the chest immediately below the left clavicle was inserted. .

He returned home on the 18th of August, having the movements of the head and neck restored to a



Jonathan Hirst, December, 1856.

tolerable degree of perfection, and the eversion of the lip somewhat lessened.

June 16, 1854. — The operation already described, for the restoration of the lower lip, was performed. The incisions healed rapidly, and the patient left the Hospital on the 7th of July, having a good lower lip and the perfect power of retaining the saliva.

December 3, 1856.—The functions and appearance of the new lip are as perfect or even more so than when Hirst left the Hospital in July, 1854. The head is carried erect, and the movements of the neck are free. The portion of skin transplanted into the neck has become stretched out so as to exceed considerably its original size both in length and breadth. The photographic original of the engraving was taken this day. In the engraving representing the patient after operation the portrait has been reversed by the artist, so that the right side of the engraving represents the left side of the subject.

CASE III.

Sarah Kaye, aged 13 years, greatly disfigured by burns on the neck, became a patient of the Leeds Infirmary in April, 1851. The movements of the head and neck were much restrained by a strong band of scar in front of the neck. The lower lip was everted and drawn down to the chin; the lower incisors had a horizontal tendency; the saliva was constantly dribbling away.

April, 1851.—The strong band of scar in front of the neck was divided, as in the former cases; and a portion of skin, transplanted from the upper part of the chest, was placed in the chasm.

By this operation the movements of the head and neck were nearly restored to their natural state; but the eversion of the lip and the involuntary discharge of saliva continued.

July 21, 1854.—The operation for restoration of the lower lip was performed.

August 2.—The wounds were healed, and the patient left the Hospital, at the end of a fortnight, able to retain the saliva, and having a pleasing expression of countenance.

The photograph for the accompanying engraving, showing the condition of the patient after operation, was taken September 29, 1854.

Sarah Kaye, April, 1851.

Sarah Kaye, September, 1854.

John Leach, April, 1855.

CASE IV.

John Leach, aged 11 years, was admitted into the Leeds Infirmary in April, 1855. He had been mutilated many months before in various parts of the body by burns occasioned by an explosion of fire-damp in a colliery.

The chin was bound down to the sternum in such a degree that he stood or sat in a bent position, with the face directed to the ground. The lower lip was everted and drawn down to the lower edge

John Leach, November, 1856.

of the chin; the saliva could not be retained; both lower eyelids were everted and drawn low down over the cheeks; the upper eyelids were everted and drawn upwards, their ciliary border being bound to the superciliary ridges, where all traces of eyebrows had been destroyed. Vision was nearly lost from a dense central opacity and haziness of the cornea, resulting from inflammation caused by the continued exposure of the part to the air.

April 5, 1855.—The strong bands in front of the

neck and the subjacent fibrous tissue being freely divided, a portion of skin, as free from scar as could be obtained, from the upper part of the chest was placed in the gap.

April 30.—The operation on the lower lip was performed. The incisions healed rapidly, and the patient was allowed to return home for a few weeks.

July 25.—The operation, already described, for restoration or rather replacement of the upper eyelids, was performed. An incision parallel to the ciliary edge, and about three lines above it, was made over each brow, the eyelid on each side was freely separated from the brow, and a piece of skin somewhat scarred was transplanted from each temple. These flaps formed a perfect union in their new places, and the eyelids were restored to their natural position.

August 30.—A similar operation was performed on both lower eyelids, but the transplanted material, being only dense scar of low vitality, sloughed on each side to a considerable extent.

In November, 1856, when the photograph was taken, the head had been so much released that he sat and walked erect, being no longer bowed down by the bands in front of the neck. The upper eyelids, after the lapse of a year and a half, were of their natural appearance, and moved freely over the eyes. Although in the operations on the lower eyelids the transplanted material partially sloughed,

yet some little diminution of the eversion resulted from them. The protection, however, which the restored upper lids gave to the eyes was sufficient to have relieved the ophthalmia which before had been permanent; the haziness of the cornea had ceased to exist, and small central scars, which did not completely obstruct vision, only remained. So far indeed was his sight improved that he was able to walk about the crowded streets of Leeds unattended. The lower lip was of good form, and the saliva was perfectly retained.

CASE V.

William Bradley, aged 12 years, was admitted into the Leeds Infirmary on account of deformities of the face and neck, caused by a severe burn. Several bands of scar extended from the chin to the sternum, but they did not much interfere with the movements of the neck. The lower lip was everted, and drawn down to the edge of the chin, exposing the teeth and gums. The upper lip was much contracted and everted, forming only a

William Bradley, June, 1856.

narrow band beneath the nose, leaving the upper teeth and gums completely exposed. The right lower eyelid was everted, and drawn far down over the cheek. The saliva was constantly dribbling away.

July 5, 1856.—The operation for restoration of the lower lip was performed.

July 26. — The right lower eyelid was restored to its natural position by the operation already described.

William Bradley, November, 1856.

August 15.—The operation by crucial incision and dovetailing of the lateral flaps was performed on the upper lip.

In November, 1856, when the photograph for the accompanying engraving was taken, the upper and lower lips, and the right lower eyelid, performed their functions. The saliva no longer dribbled from the lips.

CASE VI.

ELIZABETH CLARKE, aged 31 years, was admitted into the Leeds Infirmary on account of deformities following a severe burn when she was nine years old. When admitted into the Hospital her neck showed several bands of scar; the lower lip was drawn down to the bottom of the chin; the lower front teeth were nearly horizontal, and their free edges, from long traction of the scars on the

Elizabeth Clarke, November, 1856.

neck, were three quarters of an inch in advance of those of the upper jaw. Her articulation was very indistinct, and she was much distressed by the involuntary and constant discharge of saliva.

November 12, 1856.—Six of the lower front teeth having been previously extracted, the operation for restoration of the lower lip was performed. She left the Hospital six weeks after its performance.

Elizabeth Clarke, April, 1857.

April 16, 1857.—The photographic original for the accompanying engraving was taken this day. The patient had a good lower lip, and perfectly retained the saliva.

Reed and Pardon, Printers, Paternoster-row.